

Appln No. 10/735,147
Amdt date August 8, 2006
Reply to Office action of May 10, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ultrasonic dental insert for an ultrasonic dental tool, comprising:
 - a transducer for generating ultrasonic vibrations;
 - a connecting body having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion formed thereon;
 - a hand grip enveloping at least a portion of the connecting body;
 - at least one o-ring mounted between the connecting body and the handgrip to provide a seal between the connecting body and the handgrip;
 - ~~at least one O-ring for shock absorption, mounted on the connecting body and around the engagement portion; and~~
 - a removable tip adapted to engage the engagement portion, wherein the removable tip is made of plastic; and
 - at least one O-ring for shock absorption, mounted on the connecting body and around the engagement portion in the vicinity of a location where the tip engages the engagement portion.
2. (Previously Presented) The ultrasonic dental insert of claim 1, further comprising at least one other removable tip made of resin or metal, wherein the at least one other removable tip is interchangeable with the removable tip.
3. (Original) The ultrasonic dental insert of claim 1, wherein the removable tip comprises an attachment portion for engaging the engagement portion.

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4. (Original) The ultrasonic dental insert of claim 3, wherein the removable tip comprises a tapered portion coupled to the attachment portion.

5. (Original) The ultrasonic dental insert of claim 4, wherein the tapered portion has a generally conical wall that defines a conduit therethrough for carrying fluid used during ultrasonic dental procedures.

6. (Original) The ultrasonic dental insert of claim 4, wherein the removable tip further comprises an external tube attached along the tapered portion for carrying fluid used during ultrasonic dental procedures.

7. (Original) The ultrasonic dental insert of claim 4, wherein the tapered portion has a groove formed thereon for carrying fluid used during ultrasonic dental procedures.

8. (Original) The ultrasonic dental insert of claim 4, wherein the tapered portion has a substantially circular cross section whose diameter decreases gradually from a first end near the connecting body to a second end.

9. (Original) The ultrasonic dental insert of claim 3, wherein the attachment portion is threaded to engage the engagement portion, which is also threaded.

10. (Original) The ultrasonic dental insert of claim 9, wherein the engagement portion comprises a generally cylindrical wall defining a threaded tap for receiving the attachment portion.

11. (Original) The ultrasonic dental insert of claim 3, wherein the engagement portion comprises a generally cylindrical wall defining a cavity, and the attachment portion is pressure fit into the cavity.

12. (Previously Presented) The ultrasonic dental insert of claim 4, wherein the tapered portion includes a first portion which is generally aligned with the connecting body, and a second portion which is curved at an angle from the first portion.

13. (Original) The ultrasonic dental insert of claim 1, wherein the hand grip has formed thereon a plurality of bumps for facilitating grasping by a dental practitioner.

14. (Currently Amended) An ultrasonic dental unit comprising:
an insert comprising:

a transducer for generating ultrasonic vibrations;

a connecting body having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion formed thereon;

a hand grip enveloping at least a portion of the connecting body;

at least one o-ring mounted between the connecting body and the handgrip to provide a seal between the connecting body and the handgrip;

~~at least one O-ring for shock absorption, mounted on the connecting body and around the engagement portion; and~~

a removable tip adapted to engage the engagement portion, wherein the removable tip is made of plastic; and

~~at least one O-ring for shock absorption, mounted on the connecting body around the engagement portion in the vicinity of a location where the tip engages the engagement portion; and~~

an ultrasonic dental handpiece for receiving the insert and comprising a coil assembly for exciting the transducer.

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15. (Previously Presented) The ultrasonic dental unit of claim 14, further comprising at least one other removable tip made of metal or resin, wherein the at least one other removable tip is interchangeable with the removable tip.

16. (Original) The ultrasonic dental unit of claim 14, further comprising an electrical energy and fluid source for providing electrical signals for energizing coil assembly and fluid to the ultrasonic dental handpiece.

17. (Original) The ultrasonic dental unit of claim 14, wherein the removable tip comprises an attachment portion for engaging the engagement portion.

18. (Original) The ultrasonic dental unit of claim 17, wherein the removable tip comprises a tapered portion coupled to the attachment portion.

19. (Original) The ultrasonic dental unit of claim 18, wherein the tapered portion has a generally conical wall that defines a conduit therethrough for carrying fluid used during ultrasonic dental procedures.

20. (Original) The ultrasonic dental unit of claim 18, wherein the removable tip further comprises an external tube attached along the tapered portion for carrying fluid used during ultrasonic dental procedures.

21. (Original) The ultrasonic dental insert of claim 18, wherein the tapered portion has a groove formed thereon for carrying fluid used during ultrasonic dental procedures.

22. (Original) The ultrasonic dental insert of claim 18, wherein the tapered portion has a substantially circular cross section whose diameter decreases gradually from a first end near the connecting body to a second end.

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23. (Original) The ultrasonic dental insert of claim 17, wherein the attachment portion is threaded to engage the engagement portion, which is also threaded.

24. (Original) The ultrasonic dental insert of claim 23, wherein the engagement portion comprises a generally cylindrical wall defining a threaded tap for receiving the attachment portion.

25. (Original) The ultrasonic dental insert of claim 17, wherein the engagement portion comprises a generally cylindrical wall defining a cavity, and the attachment portion is pressure fit into the cavity.